



 PRODUCT-DETAILS

AF305-30-22-11

AF305-30-22-11 Contactor



General Information

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|-----------------------|--------------------------|
| Extended Product Type | AF305-30-22-11 |
| Product ID | 1SFL587002R1122 |
| EAN | 7320500481721 |
| Catalog Description | AF305-30-22-11 Contactor |

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| Long Description | <p>The AF305-30-22-11 is a 3 pole - 1000 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and Main Circuit Bars, controlling motors up to 160 kW / 400 V AC (AC-3) or 250 hp / 480 V UL and switching power circuits up to 500 A (AC-1) or 400 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (24-60 V 50/60 Hz and 20-60 V DC), managing large control voltage variations, reducing panel energy consumptions and ensuring distinct operations in unstable networks. Furthermore, surge protection is built-in, offering a compact solution. AF contactors have a block type design, can be easily extended with add-on auxiliary contact blocks and an additional wide range of accessories. Includes Mounting kit, containing all necessary screws, washers and sockets for connecting the terminals, and screws for mounting the device.</p> |
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Ordering

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| Minimum Order Quantity | 1 piece |
| Customs Tariff Number | 85364900 |

Popular Downloads

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| EPLAN Data | 9AAC175203_EPLAN |
| Data Sheet, Technical Information | 1SBC100214C0202 |
| Data Sheet, Technical Information (Part 2) | 1SAC200017M0002 |
| Instructions and Manuals | 1SFC100008M0201 |
| CAD Dimensional Drawing | 2CDC001079B0201 |

Dimensions

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| Product Net Width | 140 mm |
| Product Net Depth / Length | 180 mm |
| Product Net Height | 225 mm |
| Product Net Weight | 3.9 kg |
| Dimension Diagram | 1SFB535001G1060 |

Technical

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| Number of Main Contacts NO | 3 |
| Number of Main Contacts NC | 0 |
| Number of Auxiliary Contacts NO | 2 |
| Number of Auxiliary Contacts NC | 2 |
| Number of Poles | 3P |
| Rated Operational Voltage | Main Circuit 1000 V |
| Rated Frequency (f) | Main Circuit 50 / 60 Hz |
| Conventional Free-air Thermal Current (I _{th}) | acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ °C}$ 500 A |
| Rated Operational Current AC-1 (I _e) | (1000 V) 40 °C 375 A (1000 V) 55 °C 325 A (1000 V) 60 °C 325 A (1000 V) 70 °C 260 A (690 V) 40 °C 500 A (690 V) 55 °C 400 A (690 V) 70 °C 325 A |
| Rated Operational Current AC-3 (I _e) | (415 V) 55 °C 305 A (440 V) 55 °C 305 A (500 V) 55 °C 290 A (690 V) 55 °C 290 A (1000 V) 55 °C 131 A (380 / 400 V) 55 °C 305 A (220 / 230 / 240 V) 55 °C 305 A |
| Rated Operational Current DC-1 (I _e) | (110 V) 1-Pole, 40 °C 500 A (220 V) 2 Poles in Series, 40 °C 500 A (220 V) 3 Poles in Series, 40 °C 500 A |
| Rated Operational Current DC-3 (I _e) | (110 V) 2 Poles in Series, 40 °C 400 A (220 V) 3 Poles in Series, 40 °C 400 A |
| Rated Operational Current DC-5 (I _e) | (110 V) 2 Poles in Series, 40 °C 400 A (220 V) 3 Poles in Series, 40 °C 400 A |
| Rated Operational Power | (415 V) 160 kW |

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| AC-3 (P _e) | (440 V) 160 kW (500 V) 200 kW (690 V) 250 kW (1000 V) 185 kW (380 / 400 V) 160 kW (220 / 230 / 240 V) 90 kW |
| Rated Breaking Capacity AC-3 | 8 x I _e AC-3 |
| Rated Breaking Capacity AC-3e | 8.5 x I _e AC-3e |
| Rated Making Capacity AC-3 | 10 x I _e AC-3 |
| Rated Making Capacity AC-3e | 12 x I _e AC-3e |
| Short-Circuit Protective Devices | gG Type Fuses 500 A |
| Rated Short-time Withstand Current Low Voltage (I _{cw}) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 500 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 1409 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 3050 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 2440 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 996 A |
| Maximum Breaking Capacity | cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 440 V 4600 A cos phi=0.45 (cos phi=0.35 for I _e > 100 A) at 690 V 3800 A |
| Rated Insulation Voltage (U _i) | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V acc. to UL/CSA 600 V |
| Rated Impulse Withstand Voltage (U _{imp}) | Main Circuit 8 kV |
| Maximum Electrical Switching Frequency | (AC-1) 300 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 300 cycles per hour |
| Mechanical Durability | 5 million |
| Maximum Mechanical Switching Frequency | 300 cycles per hour |
| Coil Operating Limits | (acc. to IEC 60947-4-1) 0.85 x U _c Min. ... 1.1 x U _c Max. (at θ ≤ 70 °C) |
| Rated Control Circuit Voltage (U _c) | 50 Hz 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 V |
| Coil Consumption | Holding at Max. Rated Control Circuit Voltage 50 Hz 8.5 V-A Holding at Max. Rated Control Circuit Voltage 60 Hz 8.5 V-A Holding at Max. Rated Control Circuit Voltage DC 3 V-A Holding at Max. Rated Control Circuit Voltage DC 3 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 475 V-A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 475 V-A Pull-in at Max. Rated Control Circuit Voltage DC 400 V-A Pull-in at Max. Rated Control Circuit Voltage DC 400 W |
| Power Loss | at Rated Operating Conditions per Pole 19 W |
| Operate Time | Between Coil De-energization and NO Contact Opening 37 ... 47 ms Between Coil Energization and NO Contact Closing 25 ... 55 ms |
| Connecting Capacity Main Circuit | Flexible 2 x 70 ... 185 mm ² Rigid Al-Cable 1 x 185 ... 240 mm ² Rigid Cu-Cable 2 x 70 ... 185 mm ² |
| Connecting Capacity Auxiliary Circuit | Flexible with Ferrule 2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm ² Flexible 1x0.75 ... 2.5 mm ² Flexible 2x0.75 ... 2.5 mm ² Solid 2 x 1 ... 4 mm ² Stranded 2 x 1 ... 4 mm ² |
| Connecting Capacity | Flexible 2 x 70 ... 185 mm ² Rigid Al-Cable 1 x 185 ... 240 mm ² Rigid Cu-Cable 2 x 70 ... 185 mm ² |
| Degree of Protection | acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP40 acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP00 |

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| Tightening Torque | Cable Lug 9 N-m Main Circuit 22 ... 43 N-m |
| Terminal Type | Main Circuit: Bars |
| Product Name | Block Contactor |

Technical UL/CSA

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| Maximum Operating Voltage UL/CSA | Main Circuit 600 V |
| General Use Rating UL/CSA | (1000 V AC) 400 A |
| Horsepower Rating UL/CSA | (200 V AC) Three Phase 100 hp (208 V AC) Three Phase 100 hp (220 ... 240 V AC) Three Phase 125 hp (440 ... 480 V AC) Three Phase 250 hp (550 ... 600 V AC) Three Phase 300 hp |
| Full Load Amps Motor Use | (440 ... 480 V AC) Three Phase 302 A (550 ... 600 V AC) Three Phase 289 A |

Environmental

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| Ambient Air Temperature | Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 50 °C Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -40 ... 70 °C Close to Contactor for Storage -40 ... 70 °C |
| Maximum Operating Altitude Permissible | Without Derating 3000 m |

Material Compliance

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| Conflict Minerals Reporting Template (CMRT) | 9AKK108467A5658 |
| REACH Declaration | 2CMT2021-006202 |
| RoHS Declaration | 2CMT2021-006277 |
| RoHS Information | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019 |
| Toxic Substances Control Act - TSCA | 2CMT2023-006525 |
| WEEE B2C / B2B | Business To Business |
| WEEE Category | 5. Small Equipment (No External Dimension More Than 50 cm) |

ABB EcoSolutions

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| ABB EcoSolutions | Yes |
| ABB Site Meeting Group Waste To Landfill Target | Non-hazardous waste is sent to a landfill, where there is no alternative option available within 100km of a facility |
| End Of Life Disassembling Instructions | 1SFC100112M0002 |
| Environmental Product Declaration - EPD | 1SFC100104D0201 2TFP200030A1001 |
| Improved Energy Efficiency for Customers | Product Efficiency - Product considered more energy-efficient compared to similar product on market or older products from the same line |
| Recyclability Rate of the Product acc. to EN45555 | Design for Closing Resource Loops - Standard EN45555 - 76.3 % |
| Sustainable Material Content in Product (wt.) | Recycled Metal - 33 % |

%)

Certificates and Declarations

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| A2L Certificate – UL | 9AKK108468A6695 |
| ABS Certificate | 14-LD1092198-PDA |
| BV Certificate | BV_36353_A0BV |
| CB Certificate | SE-89316 |
| CCS Certificate | GB14T00030 |
| CQC Certificate | CQC2014010304676670 CQC2014010304673866 |
| Declaration of Conformity - CCC | 2020980304001305 2020980304001068 |
| Declaration of Conformity - CE | 2CMT2015-005439 |
| Declaration of Conformity - UKCA | 2CMT2020-006118 |
| DNV Certificate | DNV_E-14043 |
| EAC Certificate | 9AKK107046A8618 |
| GL Certificate | GL_95073-14HH |
| LR Certificate | LR_14_70011(E1) |
| PRS Certificate | TE_2092_880423_16 |
| RINA Certificate | ELE060313XG_002 |
| RMRS Certificate | 9AKK107045A6978 |
| UL Certificate | 20121217-E36588 |
| UL Listing Card | UL_E36588 |

Container Information

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| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 263 mm |
| Package Level 1 Depth / Length | 203 mm |
| Package Level 1 Height | 289 mm |
| Package Level 1 Gross Weight | 4.6 kg |
| Package Level 1 EAN | 7320500481721 |

External Classifications and Standards

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|---------------------------------------|--|
| Object Classification Code | Q |
| ETIM 7 | EC000066 - Power contactor, AC switching |
| ETIM 8 | EC000066 - Power contactor, AC switching |
| ETIM 9 | EC000066 - Power contactor, AC switching |
| eClass | V11.0 : 27371003 |
| UNSPSC | 39121529 |
| IDEA Granular Category Code (IGCC) | 4758 >> lec Contactors |
| E-Number (Finland) | 3706481 |

Accessories

| Identifier | Description | Type | Quantity | Unit Of Measure |
|-----------------|----------------------|----------|----------|-----------------|
| 1SFN170801R1001 | RU19/120 LVRT-Module | RU19/120 | 1 | piece |
| 1SFN170801R1002 | RU19/240 LVRT-Module | RU19/240 | 1 | piece |

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF305



360°

